

# *Project Baseline Summary Report*

Data Source: **EM CDB**

Operations/Field Office: **Chicago**

Site Summary Level: **Brookhaven National Laboratory**

Project **CH-BRNLDD / BNL Decontamination and Decommissioning Actions**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0007**

---

## **General Project Information**

### **Project Description Narratives**

#### **Purpose, Scope, and Technical Approach:**

The concern at the Brookhaven Graphite Research Reactor (BGRR) is to stabilize the facility to prevent releases to the environment or public. Subsequent to stabilization, plans will be developed for the long-term decommissioning of the BGRR. Stakeholder input will be obtained. The decommissioning alternative (dismantlement, safe store, entombment, or some combination of all three) will be identified in an Action Memorandum.

#### **Project Status in FY 2006:**

By the end of FY 2006 all Decontamination and Decommissioning activities at the BGRR will be complete.

#### **Post-2006 Project Scope:**

All activities will be complete by FY 2006.

#### **Project End State**

The end state for this project is safe and permanent closure of the BGRR by FY 2006.

#### **Cost Baseline Comments:**

A revised baseline for this project was completed in March 1999. Assessment and cleanup activities for three BGRR features external to the reactor building (sub-surface canal used for the transfer of reactor fuel elements, underground duct work, and sites surrounding the reactor building where spills of radioactive liquids and solids have occurred) will be integrated with stabilization and Decontamination and Decommissioning (D&D) of the BGRR. Stabilization activities are scheduled to be completed in FY 2002, with D&D to follow in FY 2003. Strategies to accelerate D&D are being developed and will be incorporated as baseline changes as necessary.

#### **Safety & Health Hazards:**

The primary health and safety concern is exposure of the workers from radioactive contamination.

#### **Safety & Health Work Performance:**

Within the D&D project, health and safety support and oversight of the investigation and closure of the BGRR is conducted by BNL ES&H personnel as well as specific contractor health and safety representatives. The work is performed in accordance with BNL Health and Safety Requirements as well as ALARA objectives.

#### **PBS Comments:**

The D&D Project is essential to accomplish the work required under the DOE/EPA/NYS Interagency Agreement. This project as well as Program Management (CH-BRNLPM), Remedial Actions (CH-BRNLRA), and Boneyard Waste (CH-BRNLBYW) are undergoing increased visi

#### **Baseline Validation Narrative:**

---

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

# Project Baseline Summary Report

Data Source: EM CDB

Operations/Field Office: Chicago

Site Summary Level: Brookhaven National Laboratory

Project CH-BRNLDD / BNL Decontamination and Decommissioning Actions

Report Number: GEN-01b

Print Date: 3/9/2000

HQ ID: 0007

## Project Description Narratives

Not yet validated; information was too preliminary to be reviewed during September 1998 validation of environmental restoration baseline.

## General PBS Information

Project Validated? Date Validated:

Has Headquarters reviewed and approved project? No

Date Project was Added: 12/1/1997

Baseline Submission Date: 7/7/1999

FEDPLAN Project? Yes

Drivers:	CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
	Y	Y	N	N	N	N	Y	N

## Project Identification Information

DOE Project Manager: James D. Goodenough

DOE Project Manager Phone Number: 516-344-2423

DOE Project Manager Fax Number: 516-344-7630

DOE Project Manager e-mail address: goodenough@bnl.gov

Is this a High Visibility Project (Y/N):

## Planning Section

### Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006
PBS Baseline (current year dollars)	37,298	0	37,298	141	141	127	127	3,023	130	4,081	6,109	14,657	6,165	2,865	0
PBS Baseline (constant 1999 dollars)	33,940	0	33,940	141	141	127	127	3,023	127	3,869	5,640	13,175	5,396	2,442	0

Dataset Name: FY 1999 Planning Data

Date of Dataset: 9/20/1999

Page 2 of 8

# Project Baseline Summary Report

Data Source: EM CDB

Report Number: GEN-01b

Operations/Field Office: Chicago

Print Date: 3/9/2000

Site Summary Level: Brookhaven National Laboratory

HQ ID: 0007

Project CH-BRNLDD / BNL Decontamination and Decommissioning Actions

## Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	
PBS EM Baseline (current year dollars)	37,298	0	37,298	141	141	127	127	3,023	130	4,081	6,109	14,657	6,165	2,865	0	
PBS EM Baseline (constant 1999 dollars)	33,940	0	33,940	141	141	127	127	3,023	127	3,869	5,640	13,175	5,396	2,442	0	
	2007	2008	2009	2010	2011- 2015	2016- 2020	2021- 2025	2026- 2030	2031- 2035	2036- 2040	2041- 2045	2046- 2050	2051- 2055	2056- 2060	2061- 2065	2066- 2070
PBS Baseline (current year dollars)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PBS Baseline (constant 1999 dollars)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PBS EM Baseline (current year dollars)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PBS EM Baseline (constant 1999 dollars)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## Baseline Escalation Rates

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0.00%	0.00%	0.00%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%
2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%

## Project Reconciliation

Dataset Name: FY 1999 Planning Data

Page 3 of 8

Date of Dataset: 9/20/1999

# Project Baseline Summary Report

Data Source: EM CDB

Operations/Field Office: Chicago

Site Summary Level: Brookhaven National Laboratory

Project CH-BRNLDD / BNL Decontamination and Decommissioning Actions

Report Number: GEN-01b

Print Date: 3/9/2000

HQ ID: 0007

## Project Reconciliation

### Project Completion Date Changes:

Previously Projected End Date of Project: 12/3/2004

Current Projected End Date of Project: 9/30/2005

#### Explanation of Project Completion Date Difference (if applicable):

Previous completion date of FY 2004 should have been FY 2006; program accelerated to completion by FY 2005.

### Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	31,189	Actual 1997 Cost:	141	Actual 1998 Cost:	127
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	30,921	Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):			835
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	31,756				

### Project Cost Changes

	Cost Adjustments	Reconciliation Narratives
Cost Change Due to Scope Deletions (-):		
Cost Reductions Due to Efficiencies (-):	1,685	Program acceleration.
Cost Associated with New Scope (+):	3,601	Scope for characterization and stabilization activities was added during Baseline revision.
Cost Growth Associated with Scope Previously Reported (+):		
Cost Reductions Due to Science & Technology Efficiencies (-):		
Subtotal:	33,672	
Additional Amount to Reconcile (+):	0	
Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	33,672	

### Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Submit draft Characterization	CH-BRNL-DD-001		1/31/1999	1/31/1999							

Dataset Name: FY 1999 Planning Data

Date of Dataset: 9/20/1999

# Project Baseline Summary Report

Data Source: EM CDB

Operations/Field Office: Chicago

Site Summary Level: Brookhaven National Laboratory

Project CH-BRNLDD / BNL Decontamination and Decommissioning Actions

Report Number: GEN-01b

Print Date: 3/9/2000

HQ ID: 0007

## Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Submit draft Scoping Plan to EPA/DEC	CH-BRNL-DD-002		1/31/2000	1/31/2000							
BGRR D&D Complete	CH-BRNL-DD-003		9/30/2005								
Project Start	CH-BNL-DD-004		10/1/1996								

## Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
Submit draft Characterization	CH-BRNL-DD-001										
Submit draft Scoping Plan to EPA/DEC	CH-BRNL-DD-002										
BGRR D&D Complete	CH-BRNL-DD-003				Y						
Project Start	CH-BNL-DD-004			Y							

## Performance Measure Metrics

Category/Subcategory	Units	1997-2006 Total	2007-2070 Total	1997-2070 Total	Actual Pre-1997	Planned 1997	Actual 1997	Planned 1998	Planned 1999	Planned 2000	Planned 2001	Planned 2002	Planned 2003	Planned 2004
Fac.														
Decom.- Assess.	NF	3.00	0.00	3.00										3.00
Fac.														
Decom- Cleanup	NF	3.00	0.00	3.00										
LLW														
Storage	M3							0.00	0.00	0.00	0.00	0.00	0.00	0.00
LLW														
Ship to DOE Disp.	M3	417.00	0.00	417.00										27.00

Dataset Name: FY 1999 Planning Data

Date of Dataset: 9/20/1999

# Project Baseline Summary Report

Data Source: EM CDB

Report Number: GEN-01b

Operations/Field Office: Chicago

Print Date: 3/9/2000

Site Summary Level: Brookhaven National Laboratory

HQ ID: 0007

Project CH-BRNLDD / BNL Decontamination and Decommissioning Actions

## Performance Measure Metrics

Category/Subcategory	Units	1997-2006 Total	2007-2070 Total	1997-2070 Total	Actual Pre-1997	Planned 1997	Actual 1997	Planned 1998	Planned 1999	Planned 2000	Planned 2001	Planned 2002	Planned 2003	Planned 2004
Tech.														
Deployed	Ntd	2.00	0.00	2.00					2.00					
Category/Subcategory	Units	Planned 2004	Planned 2005	Planned 2006	Planned 2007	Planned 2008	Planned 2009	Planned 2010	Planned 2011 - 2015	Planned 2016 - 2020	Planned 2021 - 2025	Planned 2026 - 2030	Planned 2031 - 2035	Planned 2036 - 2040
Fac.														
Decom.- Assess.	NF	3.00												
Fac.														
Decom- Cleanup	NF			3.00										
LLW														
Storage	M3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LLW														
Ship to DOE Disp.	M3	27.00	229.00	161.00										
Tech.														
Deployed	Ntd													
Category/Subcategory	Units	Planned 2036 - 2040	Planned 2041 - 2045	Planned 2046 - 2050	Planned 2051 - 2055	Planned 2056 - 2060	Planned 2061 - 2035	Planned 2066 - 2070	Exceptions	Lifecycle Total				
Fac.														
Decom.- Assess.	NF								2.00	5.00				
Fac.														
Decom- Cleanup	NF								2.00	5.00				
LLW														
Storage	M3	0.00	0.00	0.00	0.00	0.00	0.00	0.00						

Dataset Name: FY 1999 Planning Data

Page 6 of 8

Date of Dataset: 9/20/1999

# Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Chicago**

Site Summary Level: **Brookhaven National Laboratory**

Project **CH-BRNLDD / BNL Decontamination and Decommissioning Actions**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0007**

Category/Subcategory	Units	Planned 2036 - 2040	Planned 2041 - 2045	Planned 2046 - 2050	Planned 2051 - 2055	Planned 2056 - 2060	Planned 2061 - 2035	Planned 2066 - 2070	Exceptions	Lifecycle Total
<b>LLW</b>										
Ship to DOE Disp. Tech.	M3									417.00
Deployed	Ntd								1.00	2.00

## Facility Decommissioning

Site Code	RSF ID	Change Flag	Description	Class/Subclass	Hazard	Plan. Assess. Year	Fore. Assess. Year	Actual Assess. Date	Plan. Deac. Year	Fore. Deac. Year	Actual Deac. Date	Plan. Comp. Year	Fore. Comp. Year	Actual Comp. Date	Acc. Year	No Action	Comp. Status	RAD
BRNL	0044		AOC9A \ BGRR Bldg 701 Including Canal	Waste/Trenches / Outfalls		2004	2002					2006	2002			N		Y
BRNL	0045		AOC9B \ BGRR Underground Duct Work	Spills and Leaks\Pipeline Leaks		2004	2003					2006	2006			N		Y
BRNL	0046		AOC9C \ BGRR Spill Sites	Spills and Leaks\Surface Spills		2004	2005					2006	2006			N		Y
BRNL	0079		AOC9D\Pile Fan Sump	\			2000						2000			N		N
BRNL	0080		Below Ground Piping	\			2001						2001			N		N

## Technology Needs

Site Need Code: ch-dd01-99

Site Need Name: Characterization for Decontamination and Decommissioning of the Brookhaven Graphite Research Reactor

Focus Area Work Package ID: DD-10

Focus Area Work Package: Production Reactor D&D

Focus Area: DDFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

### Technologies

Multi Agency Site Survey and Investigation Manual

### Cost Savings (in thousands of dollars)

1,092

### Range of Estimate

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

# Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Chicago**

Site Summary Level: **Brookhaven National Laboratory**

Project **CH-BRNLDD / BNL Decontamination and Decommissioning Actions**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0007**

## Technology Needs

### Related CCP Milestones

### Related Waste Streams

### Agree?

### Change?

00037: LLW-14 - BGRR D & D

Y

N

## Technology Deployments

### Deployment Year

### Deployment Status

### Planned

### Forecast

### Actual Date

**Technology Name:** In Situ Object Counting System

Deployment Commitment 1999

**Technology Name:** Multi Agency Site Survey and Investigation Manual

Deployment Commitment 1999 1999 3/31/1999